

**WHAT IS CLAIMED IS:**

1. A method comprising:
  - (a) scanning an interrogating light across multiple sites on an array package including an addressable array of multiple features of different moieties, which scanned sites include multiple features of the array;
  - (b) detecting signals from respective scanned sites emitted in response to the interrogating light; and
  - (c) altering the interrogating light power for a first site on the array package during the array scan based on location of the first site or on a determination that the emitted signal from the first site will be outside a predetermined range absent the altering.
2. A method according to claim 1 wherein the interrogating light power is reduced based on a determination that the emitted signal from the first site will exceed a predetermined value.
3. A method according to claim 1 wherein the interrogating light power is increased based on a determination that the emitted signal from the first site will be below a predetermined value.
4. A method according to claim 3 wherein the determination is based on the emitted signal detected from the first site.
5. A method according to claim 1 wherein the interrogating light power is altered based on the signal emitted from the first site when the interrogating light initially illuminates the first site.
6. A method according to claim 1 wherein the first site is an array feature.
7. A method comprising:
  - (a) calibrating an interrogating light power versus a control signal characteristic, from a light system which provides the interrogating light of a power which varies in response to the control signal characteristic;

(b) following step (a), scanning the interrogating light across multiple sites on an array package including an addressable array of multiple features of different moieties, which scanned sites include multiple features of the array;

(c) detecting signals from respective scanned sites emitted in response to the interrogating light; and

(d) altering the interrogating light power for a first site on the array package during the array scan using the calibration of step (a), based on location of the first site or on a determination that the emitted signal from the first site will be outside a predetermined range absent the altering.

8. A method according to claim 7 additionally comprising repeating steps (a) through (d) for each of multiple array packages.

9. A method according to ~~claim 7~~ wherein the light system includes a light source and an optical attenuator through which light from the source passes to provide the interrogating light, and wherein the control signal comprises a signal for the optical attenuator which provides variable attenuation in response to the characteristic of the control signal.

10. A method according to ~~claim 7~~ wherein the interrogating light power is reduced based on a determination that the emitted signal from the first site will exceed a predetermined value.

11. A method according to claim 10 wherein the determination is based on the emitted signal detected from the first site.

12. An apparatus for interrogating an addressable array of multiple features of different moieties, carried by an array package, comprising:

- (a) a light system which provides an interrogating light of variable power in response to a control signal;
- (b) a scanning system which scans the interrogating light across multiple sites on the array package, which scanned sites include multiple features of the array;
- (c) a signal detector which detects signals from respective sites emitted in response to the interrogating light; and

(d) a system controller which adjusts the interrogating light power for a first site on the array package during the array scan based on location of the first site or on a determination that the emitted signal from the first site will be outside a predetermined range absent alteration.

13. An apparatus according to claim 12 wherein adjustment is based on the determination by the system controller, which is based on the emitted signal detected from the first site.

14. An apparatus according to claim 12 wherein the determination made by the system controller that the emitted signal from the first site during a scan is outside a predetermined range, is based on the signal emitted from the first site when the interrogating light initially illuminates the first site.

15. An apparatus for interrogating an addressable array of multiple features of different moieties, carried by an array package, comprising:

(a) a light system which provides an interrogating light of variable power in response to a control signal characteristic;

(b) a scanning system which scans the interrogating light across multiple sites on the array package, which scanned sites include multiple features of the array;

(c) a signal detector which detects signals from respective sites emitted in response to the interrogating light; and

(d) a system controller which calibrates interrogating light power in response to the control signal characteristic, and which adjusts the interrogating light power for a first site on the array package during the array scan using the calibration, based on location of the first site or on a determination that the emitted signal from the first site will be outside a predetermined range.

16. An apparatus according to claim 15 wherein the controller reduces the interrogating light power based on a determination that the emitted signal from the first site will exceed a predetermined value.

17. An apparatus according to claim 15 wherein the adjustment is based on the determination, which is based on the emitted signal detected from the first site.